

ABSTRACT

A wireless communication system has a variable number of time slots or frequencies allocated to support either uplink or downlink communications. Time slots or frequencies available for allocation to support either uplink or downlink communications are determined. Potential switching points between the available time slots or frequencies are determined. The switching points represent a change between time slots or frequencies used to support uplink and downlink communications. For each switching point, for each of uplink and downlink, a number of user that can be supported is determined by comparing a blocking probability of real time services with a required blocking probability of real time services and an average delay of non-real time services with a required average delay of non-real time services is compared. A minimum of the uplink and downlink users is selected that can be supported as the number of users that can be supported for that switching point. The switching point having a maximum number of users that can be supported is selected. The available uplink and downlink time slots or frequencies are allocated based on the selected switch point.